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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.       | CONFIRMATION NO. |
| 10/716,462  | 11/20/2003  | Jean-Pierre Mao      | 245495US41XCONT           | 6869             |
| 22850 7590 04/18/2008<br>OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>CHU, WUTCHUNG |                  |
|   |             |                      | ART UNIT                  | PAPER NUMBER     |
|   |             |                      | 2619                      |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/716,462 | <b>Applicant(s)</b><br>MAO, JEAN-PIERRE |  |
|                              | <b>Examiner</b><br>WUTCHUNG CHU      | <b>Art Unit</b><br>2619                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/3/2008</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. This communication is in response to application's amendment filed on 1/3/2008. Claims 1-20 are pending, and claims 21-24 are newly added.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7, 17-18, 21-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Robins et al. (US6430184B1).

**Regarding claim 1**, Robins et al. discloses a process and device for communicating data packet flows, including ATM (**see column 1 line 27**) comprising the steps of:

- starting a packeting operation of asynchronous data (**see col. 9 line 3**) in a packeting module (**see col. 9 line 55 – col. 10 line 5 MOM**);
- receiving, in the pakceting module (**see col. 9 line 55 – col. 10 line 5 MOM**), a message from a message composition module (**see column 17 lines 12-45**), when the message composition module needs a data packet (**see col. 6 lines 12-14 and col. 16 col. 30-64**);

- interrupting the packeting operation based on the message (**see column 7 line 8-13 where RE examines canonicalized packet headers received at interface from the QM and to determine rapidly whether the packet belongs to a known flow and to provide instructions accordingly on interface for appropriate scheduling corresponds to interrupting packeting operation based on the message**);
- transmitting a packet of asynchronous data (**see col. 9 line 3**) from the packeting module (**see col. 6 lines 1-16**) formed during the packeting operation prior to the interrupting step (**see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received**) even if the packeting operation of the asynchronous data is not completed (**see col. 17 line 31**); and
- repeating the steps of starting, receiving the message, interrupting, and transmitting thereby transmitting a plurality of data packets (**see column 22 line 62 to column 23 line 14**).

**Regarding claim 2**, Robins et al. teaches further comprising the step of receiving the packets at the message composition module (**see column 17 line 11-45 where Queue Manager QM corresponds to message composition module**).

**Regarding claim 3**, Robins et al. teaches the step of receiving the packets is performed in a predefined order (**see column 8 line 23-25**).

**Regarding claim 4**, Robins et al. teaches further comprising the step of composing a message with the packets at the message composition module (**see column 17 line 25-45**).

**Regarding claim 5**, Robins et al. teaches further comprising the step of formatting the message into a formatted message (**see column 8 line 62 –column 9 line 9**).

**Regarding claim 6**, Robins et al. teaches further comprising the step of transmitting the formatted message (**see column 10 line 2-7**).

**Regarding claim 7**, Robins et al. teaches wherein the interrupting step (**see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received**) is triggered when the message is received from the message composition module (**see column 17 line 25-45**).

**Regarding claim 17**, Robins et al. teach further comprising: recovering, one after another, packets created in a predefined order in a message composition module (**see column 8 line 23-25**).

**Regarding claim 18**, Robins et al. the message composition module recovers the data packets created by a plurality of successive packeting module one after the other in a predefined order (**see column 8 line 23-25**).

**Regarding claim 21**, Robins et al. teaches the packeting operation includes sorting and enhancing data (**see col. 9 line 55 – col. 10 line 5 MOM**).

**Regarding claim 22**, Robins et al. teaches further comprising:

- a step of requesting the data packet from the message composition module, and the step of transmitting the packet of asynchronous data from the packeting module is performed as soon as the message composition module requests the data packet (**see col. 6 lines 12-14**).

**Regarding claim 23**, Robins et al. teaches the step of interrupting the packeting operation is performed as soon as the packeting module receives the message from the message composition module (**see col. 11 lines 10-13 and col. 23 lines 24-25**), and further comprising a step of transmitting an incomplete data packet (**see col. 17 lines 31**), being composed at a time of the interrupting, to the message composition module after the step of interrupting the incomplete packet, and further comprising a step of starting a next packeting operation composing a next data packet as soon as the incomplete packet is transmitted (**see col. 6 lines 3-23**).

**Regarding claim 24**, Robins et al. teaches the message composition module needs the data packet after the message composition module has transmitted a previous data packet (**see col. 16 lines 30-64**) and the message composition module is ready to start the packeting operation again (**see col. 11 lines 10-13 and col. 24 lines 34-36**).

***Claim Rejections - 35 USC § 103***

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 9, 12, 14, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1) in view of the background of Chandos et al. (US5615214).

**Regarding claims 9, 16, and 19** Robins et al. disclose all the subject matter of the claimed invention with the exception of the total time duration is less than 100ms, the packeting time duration is approximately equal to the total time duration, and a time duration for transmitting the message is negligible compared to the packeting time duration.

The background of Chandos et al. from the same or similar fields of endeavor teaches the system delay to be of tens or hundreds of millisecond in addition to inherent propagation times (**see Chandos et al. column 1 line 25-41**), and propagrtion path

delays vary as relay node evolve (**see Chandos et al. column 1 line 42-44**). In addition, the term “packetting time duration is approximately equal to the total time duration” does not specifically definite the time duration of transmission. Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the system delay that is introduced by the background of Chandos et al. in the process and device for communicating data packet flows, including ATM of Robins et al. in order to determine system delay.

**Regarding claim 12**, Robins et al. teaches a process for transmitting a packet of asynchronous data, comprising the steps of:

- Packetting, in a packetting module (**see col. 9 line 55 – col. 10 line 5 MOM**), the asynchronous data (**see col. 9 line 3**) into a packet during a packetting time (**see column 8 line 16**);
- Requesting, by a message composition module, the packet when the message composition module needs the packet (**see col. 6 lines 12-14**);
- stopping the packetting (**see column 16 line 17-64 and column 17 line 25-45**);
- composing a message comprising the packet (**see column 17 line 25-45**);  
and



- transmitting the message during a message transmitting time (**see column 10 line 2-7**) even if the packeting is not completed (**see col. 17 lines 31**).

Robins et al. discloses all the subject matter with the exception of packeting time(TP) and transmission time (TMS)  $TP > TMS$ .

The background of Chandos et al. from the same or similar fields of endeavor teaches the system delay to be of tens or hundreds of millisecond in addition to inherent propagation times (**see Chandos et al. column 1 line 25-41**), and propagrtion path delays vary as relay node evolve (**see Chandos et al. column 1 line 42-44**). In addition, the term “packeting time duration is approximately equal to the total time duration” does not specifically definite the time duration of transmission. The propagation delay is not constant and could either be lesser or greater than system delay, therefore it meets the limitation that  $TP > TMS$ . Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the system delay that is introduced by the background of Chandos et al. in the process and device for communicating data packet flows, including ATM of Robins et al. in order to determine system delay.

**Regarding claim 14**, Robins et al. teaches wherein the stopping step (**see column 17 line 43-45 where “cut-through” mode of operation in which packet is ended and the data is transmitted before a complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received**) is triggered by the requesting step (**see column 25 line 45-52**).

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 8, 10-11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. (US6430184B1).

**Regarding claims 8, 10-11, 13, and 15,** Robins et al. discloses all the subject matter with the exception of  $TP > TT/2$ ;  $TP = TT$  when  $TP >> TMS$ ;  $TP = TBS$ . Robins et al. discloses a cut-through mode of operation in which packeting is ended and data transmitted before the complete packet is realized, such that portions of a packet may be transmitted while other portions are still being received. In this mode, the time for packeting (TP) could equals the maximum delay allowable before transmitting of data (TT), or time for packeting (TP) is more than half of a total time for packeting the asynchronous data and for transmitting the message, or the time for packeting (TP) equals bus cycle time (TBC), thereby meeting the limitations of the claim.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robins et al. in view of admitted prior art.

**Regarding claim 20**, Robins et al. teaches start of packet SOP, middle of packet MOP, end of packet EOP, and start and end of packet SEP (**see Robins et al. figure 6a and column 8 line 15-25**) and disclose all the subject matter of the claimed invention with the exception of a number of data in the packet of asynchronous data equal to or less than 11.

The admitted prior art from the same or similar fields of endeavor teaches the use of a number of data in the packet of asynchronous data equal to or less than 18 (**see Table 1**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the a number of data in the packet of asynchronous data equal to or less than 18 in the process and device for communicating data packet flows, including ATM of Robins et al. in order to enhance system efficiency.

### ***Response to Arguments***

11. Applicant's arguments filed 1/3/2008 have been fully considered but they are not persuasive.

**With regard to applicant's remark for claim 1 (page 8)**, applicant submits that Robins fails to teach or suggest "receiving, in the packeting module, a message from a message composition module when the message composition module needs a data packets."

Robins discloses a QM (col. 11 lines 10-13 as corresponds to message composition module), which the received frame, reorganized into one or more cells, the first cell containing the canonical header and higher layer headers, is communicated to and from the QM. And Robins discloses in col. 6 lines 12-14, where FIFO can accept

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more data. Furthermore, Robins discloses in col. 24 lines 33-36, where QM sends a sync acknowledge to the MOM. The MOM then will send up any credits with the assurance that the QM is ready to accept the credits, which corresponds to the a message is sent from a message composition module when the message composition module needs a data packets, and meet the limitation. Therefore, rejection respectfully remains.

Examiner's Note: examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the figures may apply as specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shirakawa et al. (US7027442)

Oz et al. (US6879634)

Mansouri et al. (US6577640)

Luddwig et al. ((US6948108)

Shirakawa et al. (US6804240)

Clauberg (US6735219)

Yoshio et al. (US7181298)

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13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WUTCHUNG CHU whose telephone number is (571)270-1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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